An empirically derived taxonomy of common distress syndromes in the medically ill

David M. Clarke[a],*, Graeme C. Smith[a], David L. Dowe[b], Dean P. McKenzie[a,c]

[a]Consultation-Liaison Psychiatry Research Unit, Department of Psychological Medicine, Monash University, Melbourne, Victoria, Australia
[b]School of Computer Science and Software Engineering, Monash University, Melbourne, Victoria, Australia
[c]Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, Victoria, Australia

Abstract

Objective: Contemporary psychiatric classifications have not proved to be useful in the understanding and care of people with physical illness. Distress syndromes are common, but classifications fail to differentiate syndromes relevantly. We sought to take a fresh look at the common distress syndromes in the medically ill. **Methods:** 312 medical inpatients were interviewed using a structured psychiatric interview [the Monash Interview for Liaison Psychiatry (MILP)] to elicit the presence of mood, anxiety and somatoform symptoms. A previously reported examination of these data using latent trait analysis revealed the dimensions of demoralization, anhedonia, autonomic anxiety, somatoform symptoms and grief. Patients were scored on these dimensions and, on the basis of these, subjected to cluster analysis. Derived classes were compared on a range of demographic and clinical data including psychiatric diagnosis. **Results:** Six classes were found, distinguished by general levels of distress (measured by demoralization, autonomic anxiety and somatoform symptoms), anhedonia and grief. The most distressed groups were Demoral-ization and Demoralized Grief. Anhedonic Depression showed moderate levels of distress but the highest level of social dysfunction. Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) categories of mood disorders did not follow any particular pattern other than reflecting severity of distress. The classes of high distress (Demoralization and Demoralized Grief) were significantly associated with younger age, past history of psychiatric treatment, low Global Assessment of Functioning (GAF) scores over the previous 12 months and DSM-IV somatoform disorders. Patients with Demoralized Grief tended to acknowledge their illness as a significant and relevant stressor. Patients with Demoralization identified other stressors as significant. **Conclusion:** Concepts of demoralization, anhedonia and grief differentiate between important clinical syndromes and have informed the development of a taxonomy of common distress syndromes in the medically ill. Research is required to further explore the validity and utility of these concepts. © 2003 Elsevier Science Inc. All rights reserved.

Keywords: Classification; Demoralization; Depression; Grief; Taxonomy; Psychosomatic

Introduction

The development of diagnostic classifications using operationalised criteria, as exemplified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) [1] and the International Classification of Diseases (ICD-10) [2], has undoubtedly had a major impact on psychiatry. It has provided reliability of diagnosis, a common language for psychiatrists and a focus for research. However, as the

early developers knew, the validity of such diagnostic systems would need to be tested [3]. Within the clinical area of consultation-liaison psychiatry—that is, in the situation of the presence of comorbid physical illness, there is a considerable body of literature highlighting the inability of these diagnostic systems to describe adequately the nature, range and aetiological understandings of the phenomena seen [4,5]. An important example is the diagnosis of depression where there is a high prevalence in this population but a lack of differentiation of syndromes within the depressive spectrum [6–8]. Although grades of severity of depression are recognised, there is little meaningful subtyping [9,10]. Furthermore, depressive symptoms frequently coexist with anxiety and somatic

---

* Corresponding author. Department of Psychological Medicine, Monash Medical Centre, 246 Clayton Road, Clayton, Victoria 3168, Australia. Tel.: +61-3-9594-1479; fax: +61-3-9594-6499.
E-mail address: david.clarke@med.monash.edu.au (D.M. Clarke).

symptoms [11]. As van Praag [12] suggests, "syndromal differentiation has disappeared from the diagnosis of depression" (p. 767).

This difficulty in applying a standard psychiatric classification to the consultation-liaison setting is an example of "category fallacy" (to borrow a term from the transcultural literature) where a restrictive diagnostic template developed in one population is used in another culture "for whom it lacks coherence and its validity has not been established" [13, p. 452]. Upon this background, we decided to embark on a fresh examination of the psychopathology of patients presenting with physical illness, and specifically of the affective and somatic expressions, with a view of developing a more relevant taxonomy.

There are several steps in developing a classification. We have followed Paykel's [14] advice: "first to group symptoms into syndromes and then to group individuals with syndromes into diagnostic categories" (p. 357). In the absence of a "gold standard" [15], we used latent trait analysis (as employed by Goldberg et al. [16] and Ormel et al. [17]) to examine the dimensional structure of the symptom data and a cluster analytic technique for the second stage of grouping individuals. The latent trait analysis identified five dimensions, which we named demoralization, anhedonia, autonomic anxiety, somatoform symptoms and grief, and has been reported previously [18]. This paper describes the second stage, involving a cluster analysis of subjects, and a comparison of the derived classes with standard DSM-IV diagnoses, demographic and clinical data.

Method

Subjects and data

The study was conducted at Monash Medical Centre, a university-affiliated general hospital in Melbourne, Australia. The subjects, described previously [18], were 312 patients admitted consecutively to the medical wards, screened for probable caseness with a 36-item General Health Questionnaire (GHQ) [19]. The binary scoring of Goodchild and Duncan-Jones [20], with a cutoff of 20/21, was used on the basis that it has good sensitivity for a broad range of disturbance in a medical population [21]. Thirty-four percent of screened patients scored above the cut-off. We excluded patients who were unable to participate because of mental or physical incapacity or inadequate fluency in the English language. The mean age of the patient sample was 47.5 years (range 18–85) and 61% were female. They had been admitted to hospital with a range of medical conditions: 22% cardiovascular, 17% gastrointestinal, 15% respiratory, 13% rheumatological and 11% neurological.

Symptom data from the sample were obtained by interview, carried out within the first 3 days of admission

to hospital, by experienced and trained research psychologists. The Monash Interview for Liaison Psychiatry (MILP) [20] was used. This is a structured interview able to make DSM-IV and ICD-10 diagnoses. Interrater reliability has been shown to be good with mean κ for agreement of items of 0.83 and of diagnoses 0.68. The κ value of agreement between MILP diagnoses and checklist diagnoses, used as a measure of procedural validity, has averaged 0.61 [22].

Information concerning demography, past psychiatric history and the presence of stressors was also obtained at interview. Immediately following the interview, the research psychologist assigned scores for current Global Assessment of Functioning (GAF) [1] and highest GAF over the previous 12 months. In collaboration with the hospital medical staff, medical diagnoses were coded using ICD-9CM and a Karnofsky rating [23] made of physical functioning.

After entry into computer, symptom data were submitted to latent trait analysis as previously described [18]. In addition, DSM-IV diagnoses were made using a previously validated computerised algorithm [22,24].

Statistical analysis

Scores were computed for each subject on each of the five dimensions by summing the symptoms present loading on each dimension. The Snob computer program [25,26] was used to derive the taxonomic classes. This cluster analytic technique, previously applied to psychiatric research [27–31], is based on information theory. Searching the data, Snob uses "minimum measure length" (MML), a numeric measure of model parsimony, for both allocating subjects to classes and for determining the number of classes within the multivariate population [32,33]. If the message length is diminished when classes are split or combined to make an assignment, then the assignment is retained; otherwise, it is rejected. An assumption underlying Snob is that, within each class, dimensions are essentially uncorrelated. Correlation of dimensions could be modelled by MML factor analysis [32], although development of MML clustering with factor analysis is in early stages [34].

After development of the model, subjects were assigned to classes using two different ways, described below. In order to characterise classes, mean dimension scores were derived for patients within each class and compared. Classes were also compared on demographic variables, GHQ scores, current GAF scores, highest GAF over the previous 12 months, presence of past psychiatric history (defined as any inpatient or outpatient psychiatric treatment), nature of any identified stressor (categorized "none," "medical illness" or "other"), medical diagnosis and the Karnofsky rating of physical functioning. The GHQ scales of depression, anxiety and social dysfunction, derived from the 28-item version, were scored in a Likert